

# EAGLE XO



## Open Front, direct detection CCD

2048x2048 – 75KHz/2MHz – high resolution soft X-ray scientific imaging



### Key Features and Benefits



#### Ultimate Sensitivity Performance

- **Open front end**  
CF152 (6") flange for direct interfacing to vacuum chambers
- **Deep cooled using Thermoelectric cooler (TEC)**  
minimize dark current and enable long exposure
- **Back Illuminated 4MP no coating**  
Optimizes sensitivity and large field of view imaging
- **13.5um x 13.5um pixel**  
Enables ultra sharp image resolution and high dynamic range

Resolution	2048 x 2048
Dark Current	0.005 e/p/s @ -60C
Full Well Capacity	100,000e-
Readout Noise	2.3e-rms
Cameralink	16bit



..... Capturing Tomorrow

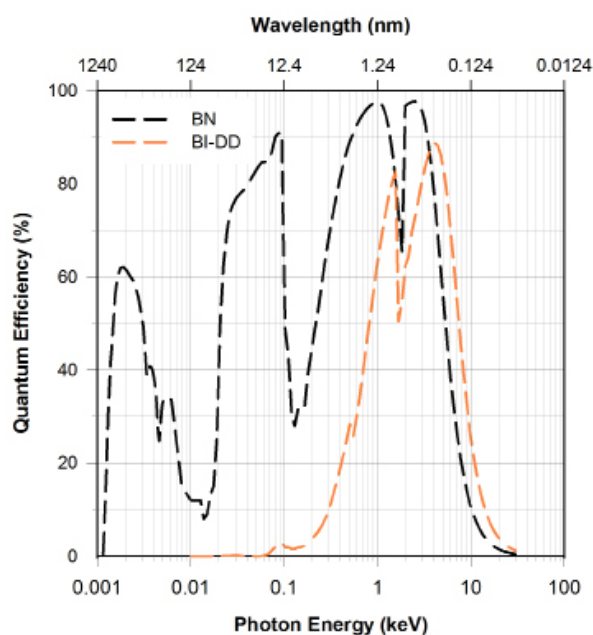
## Specification for Eagle XO

<b>Sensor</b>	E2V CCD42-40 Back Illuminated, AIMO or E2V CCD42-40 Back Illuminated Deep Depleted, AIMO
<b>Active Pixel Array Size</b>	(2048 × 2048) pixels
<b>Pixel Size</b>	13.5µm × 13.5µm
<b>Active Area</b>	27.65mm × 27.65mm (39.10mm diagonal)
<b>Binning</b>	Programmable, up to 64×64 pixels
<b>Full Well Capacity</b>	100 000 e <sup>-</sup>
<b>Non-Linearity</b>	< 1%
<b>Readout Noise</b>	@ 75kHz pixel readout rate, 2.3 e <sup>-</sup> rms @ 2MHz pixel readout rate, 9.0 e <sup>-</sup> rms
<b>Peak Quantum Efficiency (QE)</b>	> 90%
<b>Spectral Response</b>	1.2eV to 20KeV
<b>Dark Current @ -60°C</b>	0.005 e <sup>-</sup> /pixel/second
<b>Cooling</b>	Active, ΔT > 90°C
<b>Cooling Method</b>	Air / Liquid
<b>Flange</b>	CF152 (6") - See Note 1
<b>Synchronization</b>	Trigger IN and OUT – TTL compatible
<b>Digital Output</b>	16-bit
<b>Data Interface</b>	Cameralink (base)
<b>Power Supply</b>	12V DC ±10%
<b>Total Power Consumption</b>	TEC OFF < 9W TEC ON < 60W
<b>Operating Temperature Range</b>	-20°C to +55°C
<b>Storage Temperature Range</b>	-40°C to +70°C
<b>Dimensions</b>	141mm x 133mm x 110mm
<b>Weight (excluding lens)</b>	5.0kg [11lb]

Note 1: Other flange options available such as ISO-K-DN100-  
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## Dimensions

## Quantum Efficiency



## Ordering Information

### Camera

Eagle XO Open Front CCD 4MP	EA4240XO-BN-CL
Eagle XO Open Front CCD 4MP	EA4240XO-BIDD-CL
Eagle XV Power Supply unit	E4240XV-PSU

### Optional Accessories

EPIX(R) EB1 base CL card	RPL-EPIX-EB1
EPIX(R) XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m <sup>2</sup>	RPL-CL-CBL-2M
Water cooler (Recommended coolant flow rate >0.5liters per min. & cooling capacity >100W @ 20°C)	Contact us for order information

Note2: Longer CL cable available

Note 3: Please consult us to check our range of lenses

Demo is available on request.  
Pricing AOR subject to volumes.

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